

REMARKS

This response is accompanied by an RCE and addresses the final Office Action mailed April 8, 2003. Reconsideration of the present application is respectfully requested.

I. Claim rejections – 35 U.S.C. 112, second paragraph.

In the final Office Action, the Examiner rejected Applicant's Claims 1-20 under 35 U.S.C. 112, second paragraph. The Examiner took the position that various terms and phrases, such as "*thereto*" and "*thereof*", were not clear or were not consistent with the specification. Applicant disagrees and submits that one of ordinary skill in the art would be able to determine what is and what is not covered by the claims. Accordingly, Applicant's claims, as originally filed, are fully in compliance with 35 U.S.C. 112, second paragraph. However, in the interest of advancing prosecution and allowance of the present application, Applicant has amended the claims of the present application to make them even clearer. This amendment is not intended to narrow the scope of the claims or be a concession that the claims, as originally filed, were unpatentable for any reason.

With this amendment, Applicant's independent Claims 1 and 14 have been cancelled and replaced with new independent Claims 21 and 22. New Claims 21 and 22 express the subject matter in ways that address the Examiner's objections about certain terminology and wording. New Claims 21 and 22 describe the subject matter such that one of ordinary skill in the art would be able to determine what is and what is not covered by the claims. Accordingly, Claims 21 and 22 fully meet the requirements of 35 U.S.C. 112, second paragraph.

Dependent Claims 2-13 and 15-17 have been amended to make them conform to new independent Claims 21 and 22.

With this amendment, Claim 18 has been amended to address the Examiner's objections regarding wording that the Examiner contended was ambiguous or unclear. Applicant submits that original Claim 18 fully complied with 35 U.S.C. 112, second paragraph. Claim 18, as amended in this response, is even more clear.

II. Claim rejections – 35 U.S.C. 103

In the final Office Action, Applicant's independent Claims 1 and 14 and dependent Claims 2-4, 7-13 and 15-17 were rejected as obvious over U.S. Pat. No. 5,179,645 ("Tanimori") and Applicant's independent Claim 18 and dependent Claims 5, 6, 19 and 20 were rejected as obvious over the combination of Tanimori and U.S. Pat. No. 6,208,352 ("Blackwell"). As stated above, with this response Applicant has canceled independent Claims 1 and 14 and replaced them with new Claims 21 and 22 in order to express the subject matter even more clearly. Applicant's new independent Claims 21 and 22, as well as Claims 2-4, 7-13, and 15-17, are not obvious over Tanimori. Applicant's independent Claim 18 and dependent Claims 5, 6, 19 and 20 are not obvious over the combination of Tanimori and Blackwell.

Tanimori discloses the method of recognizing graphic objects that overlap by a designated degree (Tanimori: column 2, lines 1-6). To find overlapping graphic objects, Tanimori finds crosspoints (Tanimori: column 5, lines 53-60). According to Tanimori, the connecting relationship between the segments that make up the objects is changed (Tanimori: column 7, line 60-column 8, line 18; column 9, line 54-column 10, line 33). Then, graphic objects having a designated degree of overlapping are determined (Tanimori: column 11, line 28-column 12, line 12).

Tanimori fails to disclose or suggest several limitations of Applicant's new independent Claim 21. For example, Tanimori fails to disclose or suggest the step of "*determining*" a "*first known portion*" of a "*boundary*" of a "*polygonal intersection*" as being that "*portion*" of the "*boundary*" of the "*first polygon . . . located inside the second polygon.*" Tanimori has no disclosure or suggestion about determining whether anything is located inside objects. Therefore, Tanimori does not disclose or suggest the first step of Applicant's Claim 21 in which the "*portion*" of the "*boundary*" of the "*first polygon*" which is "*located inside*" the "*second polygon*" at an "*intersection*" of the "*boundaries*" of the "*first*" and "*second polygons*" is the "*first portion*" of the "*boundary*" of a "*polygonal intersection.*"

Tanimori also fails to disclose or suggest the second step in Applicant's Claim 21. Specifically, Tanimori fails to disclose or suggest the step of "*determining*" a "*subsequent portion*" of the "*boundary*" of the "*polygonal intersection*" by selecting that "*portion*" of the "*boundary*" of either the "*first polygon*" or the "*second polygon*" that connects to the "*leading end*" of the "*current known portion*" "*where a leading end of the current known portion of the boundary of the polygonal intersection connects to two other links*" and that forms a "*minimum rotation angle*" in the "*rotational direction*" with the "*current known portion*" of the "*boundary*" of the "*polygonal intersection*" if the "*direction of traversal*" of the "*current known portion*" of the "*boundary*" of the "*polygonal intersection*" is "*opposite the known rotational direction*" or that forms a "*minimum rotation angle*" in the "*opposite rotational direction*" with the "*current known portion*" of the "*boundary*" of the "*polygonal intersection*" if the "*direction of traversal*" of the "*current known portion*" of the "*boundary*" of the "*polygonal intersection*" is the "*same as the known rotational direction.*" Tanimori is completely devoid of any teaching or suggestion about using known rotational directions to determine properties of polygons. Accordingly, Tanimori fails to disclose or suggest this step of Claim 21.

Applicant's independent Claim 22 distinguishes Tanimori for reasons similar to those explained in connection with Claim 21.

Applicant's dependent Claims 2-13 and 15-17 distinguish Tanimori at least for the same reasons as their respective independent base claims. Moreover, these dependent claims include additional features that are neither disclosed nor suggested by Tanimori.

Applicant's independent Claim 18 is not obvious over the combination of Tanimori and Blackwell for several reasons. First, the combination of Tanimori and Blackwell fails to disclose either the step of "*determining a first minimum bounding rectangle that encompasses the first polygon*" or the step of "*determining a second minimum bounding rectangle that encompasses the second polygon.*" Neither Tanimori nor Blackwell has any disclosure about the formation of "*minimum bounding rectangles.*"

Further, because Tanimori and Blackwell do not disclose either of the steps of Applicant's Claim 18 in which a "*minimum bounding rectangle*" is determined for the "*first*" and "*second*" "*polygons*", the combination of Tanimori and Blackwell also fails to disclose the steps of "*determining that the first minimum bounding rectangle and the second minimum bounding rectangle intersect*" and "*identifying all the links located entirely in a first polygonal area formed by an intersection of the first minimum bounding rectangle and the second minimum bounding rectangle that have at least one node at an endpoint thereof.*" Further, since Tanimori and Blackwell fail to disclose the "*identifying*" step, the combination of Tanimori and Blackwell also necessarily fails to disclose the steps of "*associating in a node-link map each node connected to each of the identified links with each of the links connected thereto*" and "*identifying a node from the node-link map that has at least three links connected thereto.*"

Still another reason why Applicant's Claim 18 is not obvious over the combination of Tanimori and Blackwell is that this combination fails to disclose the step recited in Claim 18 of "*determining which one of said at least three links that belong to the other of polygons is located inside the one of said polygons.*" As explained above in connection with Applicant's Claims 21 and 22, Tanimori fails to disclose anything about determining whether a portion of a boundary of one polygon is inside another polygon. Blackwell also fails to disclose this step. Accordingly, the combination of Tanimori and Blackwell fails to disclose this-step of Applicant's Claim 18.

Yet another reason why Claim 18 is not obvious that Tanimori and Blackwell fail to disclose or suggest any analysis of a "*minimum rotation angle.*" Accordingly, the combination of Tanimori and Blackwell also necessarily fails to disclose the step of Applicant's Claim 18 of "*determining*" each "*other link*" of the "*polygonal intersection by selecting . . . that link that forms a minimum rotation angle . . . with the currently known link.*"

For any of the above reasons, Claim 18 is not obvious over the combination of Tanimori and Blackwell.

Applicant's Claims 19 and 20 are dependent claims that depend from independent base Claim 18 and are allowable at least for the same reasons. In addition, these

dependent claims include limitations that are neither disclosed nor suggested by the combination of Tanimori and Blackwell.

III. Extension of time

Included with this response is a petition for an extension of time to respond to the Office Action dated April 8, 2003 and an authorization for payment of the fee associated therewith.

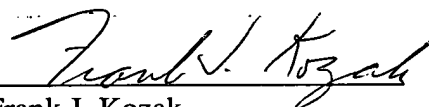
IV. Information Disclosure Statement

Included with this response is a third information disclosure statement that includes five references. The Examiner is requested to review these references and make them of record in the present application.

V. Conclusion

Applicant submits that this response addresses all the issues in the Office Action dated April 8, 2003. Therefore, the present application is in condition for allowance. If any issues remain, the Examiner is invited to call the undersigned.

Respectfully submitted,



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